

NOAA Science Update to the Science Advisory Board

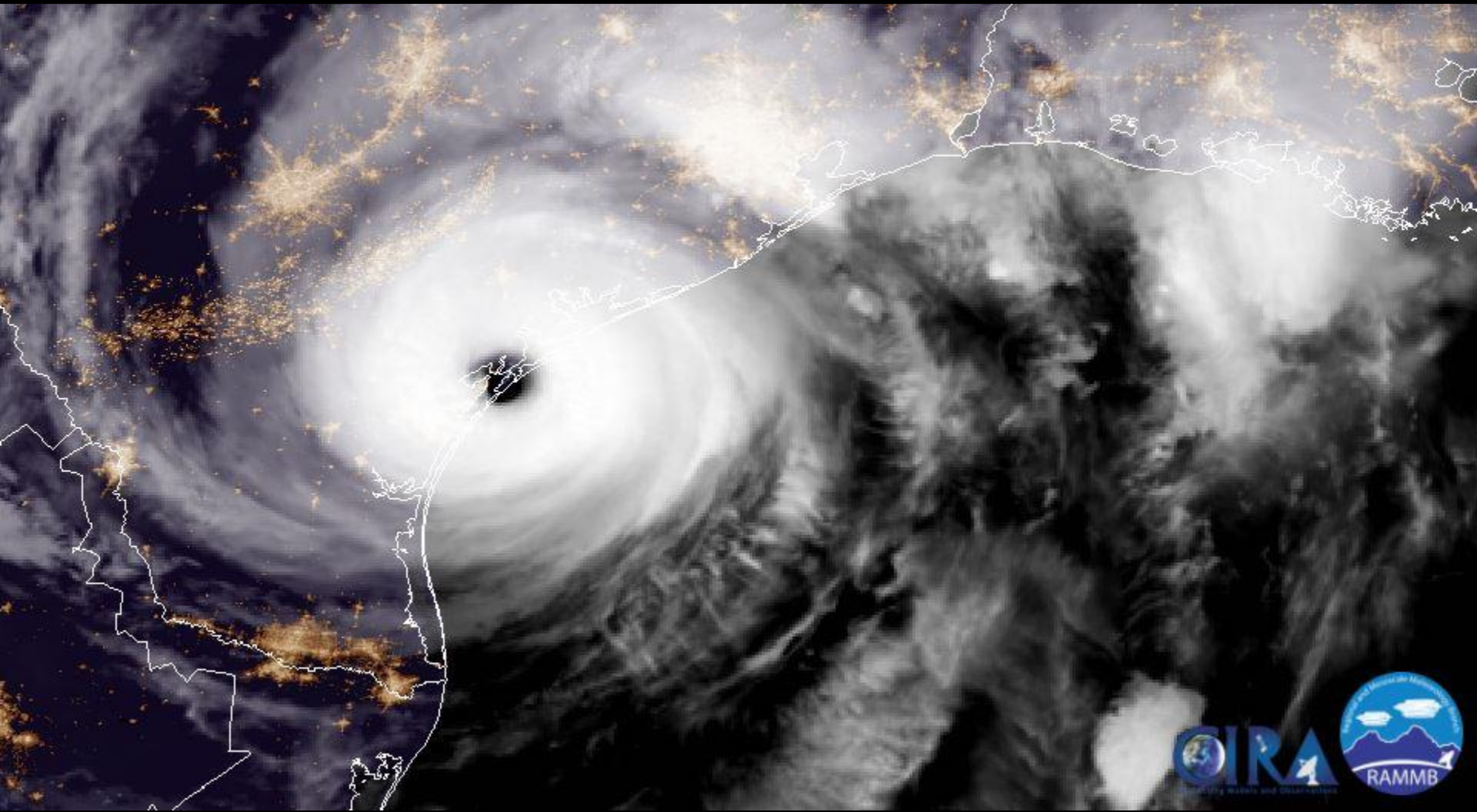
Craig McLean
Acting Chief Scientist
October 30, 2017



Weather Ready Nation Update



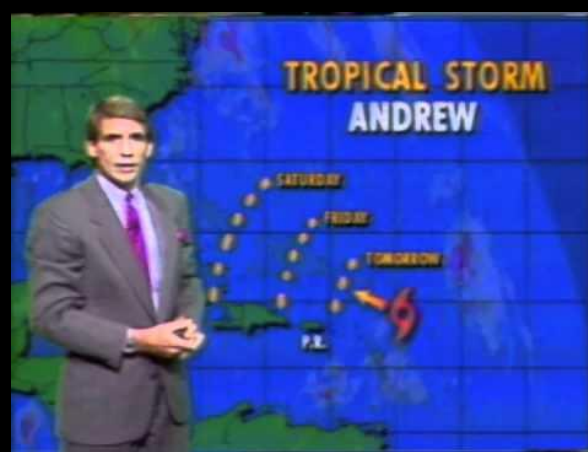
NOAA Responds to the 2017 Atlantic Hurricane Season



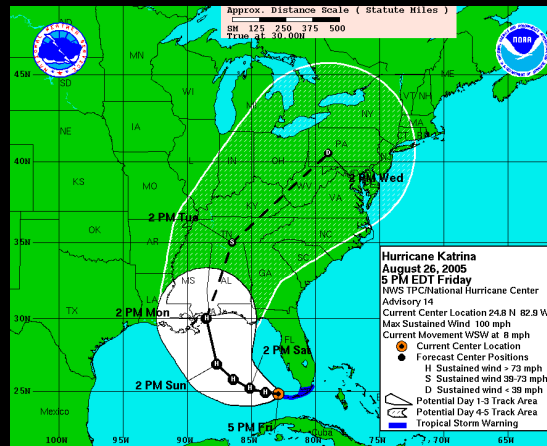
NOAA

Before the Storms: Forecasting Improvements over the Past 25 years

Andrew 1992



Katrina 2005



Irma 2017

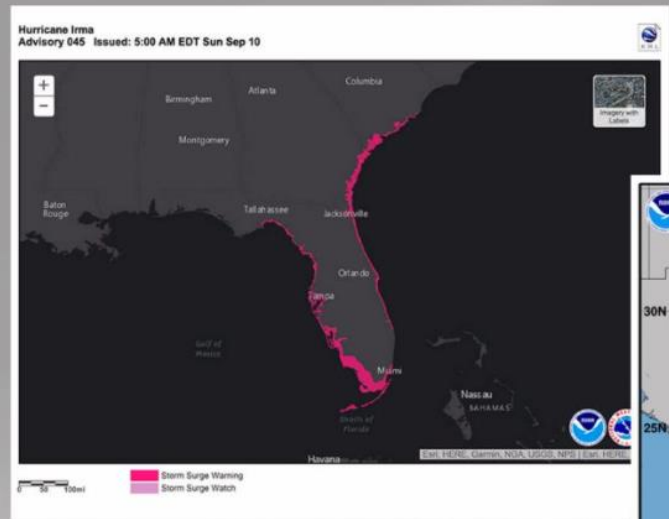


Before the Storms



Louis Uccellini briefed FEMA personnel at the NOAA Center for Weather and Climate Prediction in College Park, Maryland.

Before the Storms



During the Storms



During the Storms

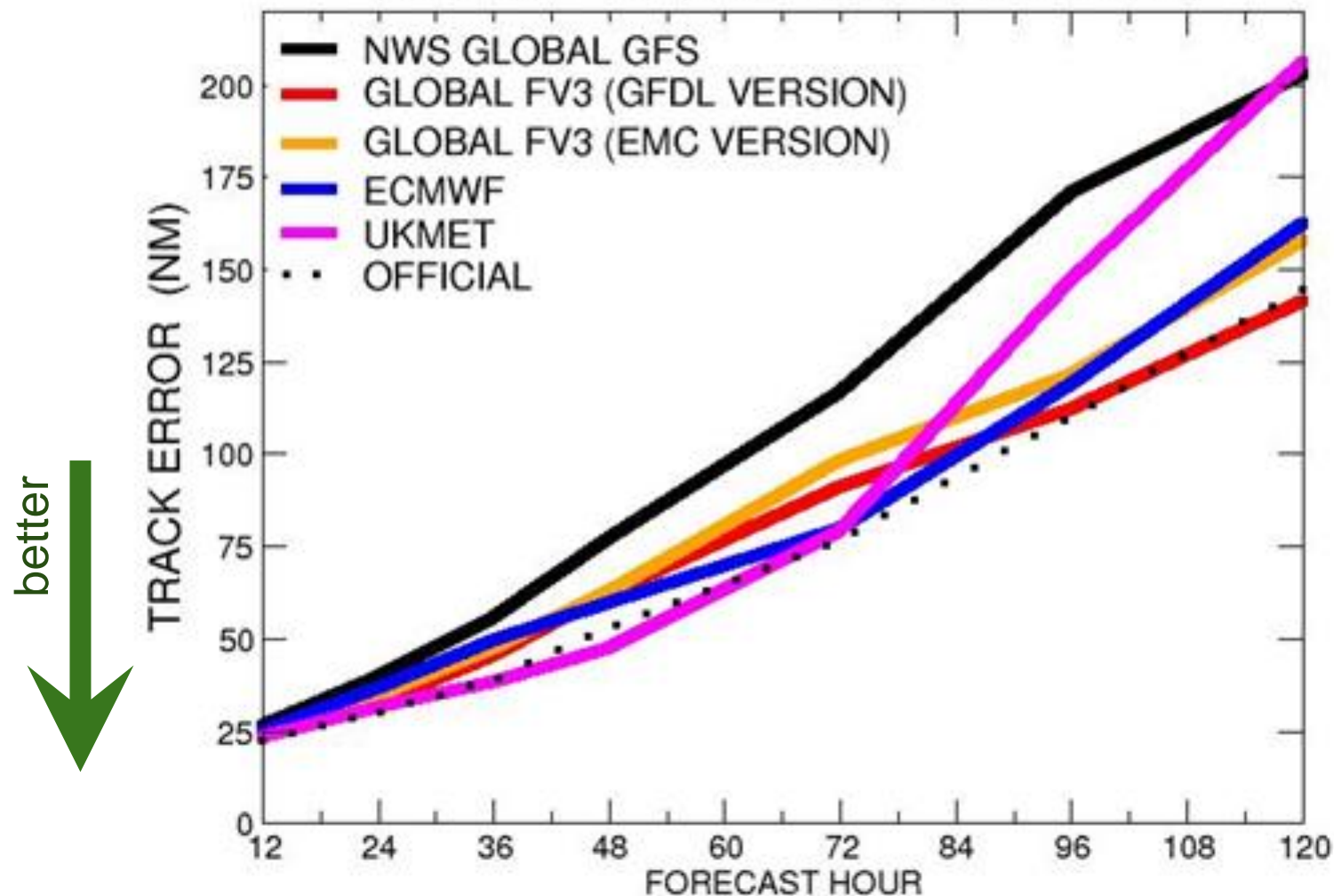


During the Storms



During the Storms: FV3 Update

HURRICANE HARVEY



After the Storms: Sea Grant aids Local Communities' Recovery



Don Behringer



Rhonda Cummins



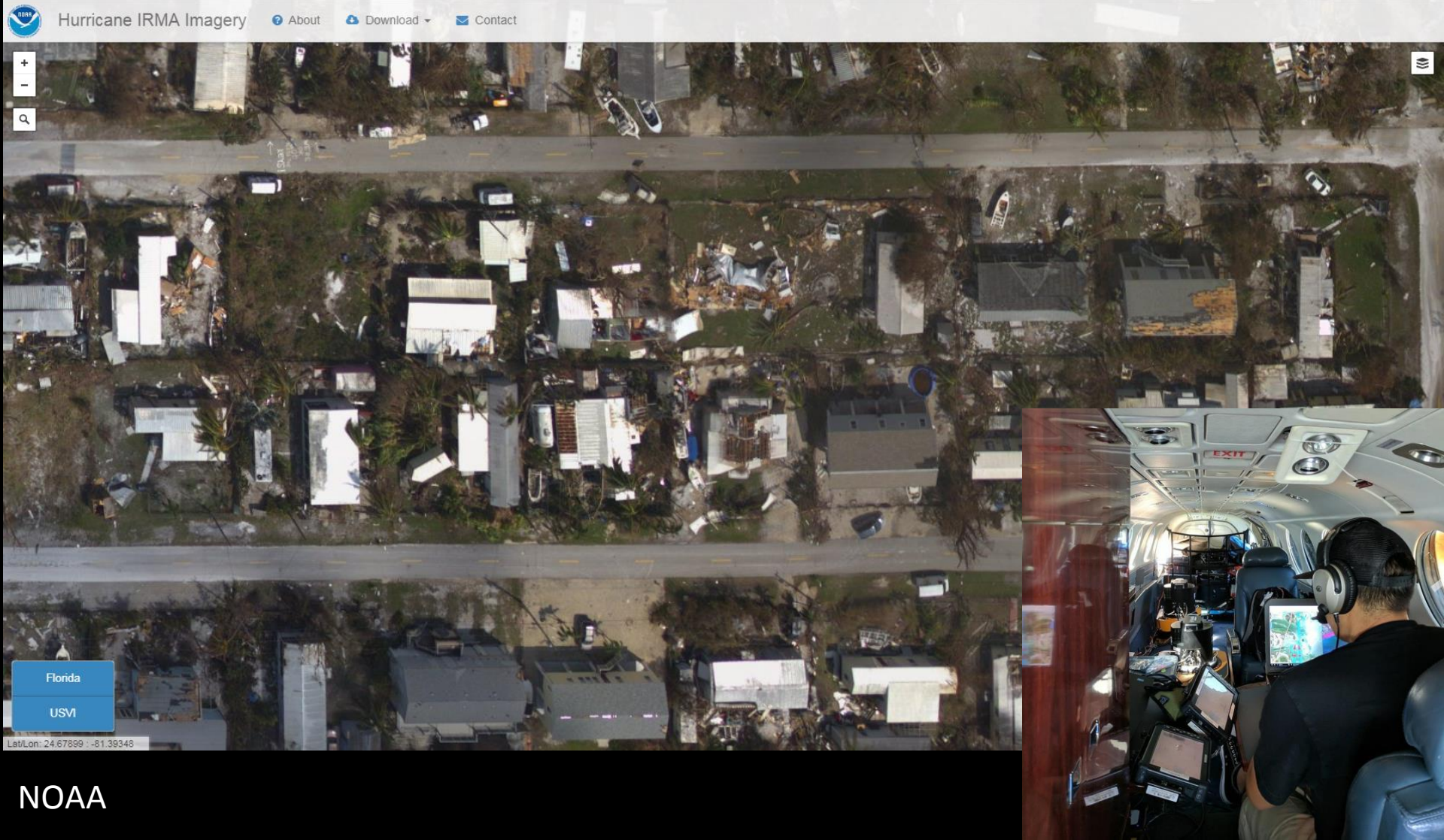
Texas Sea Grant



After the Storms: NOAA Ship Thomas Jefferson Heads to Puerto Rico



After the Storms: Aerial Photos Reveal Property Damage



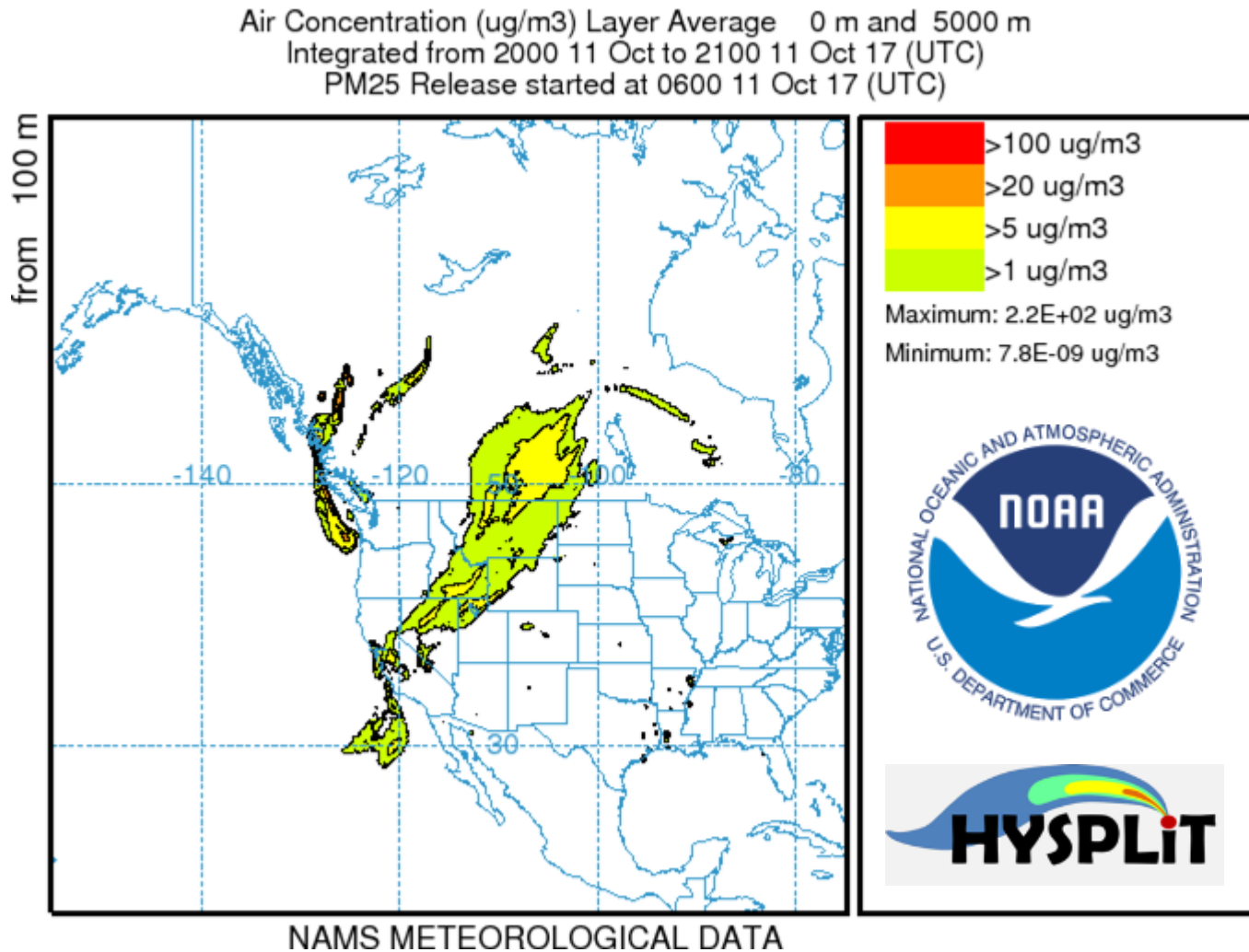
After the Storms: Glider Workshop in November will Evaluate 2017 Operations and Plan for the Future



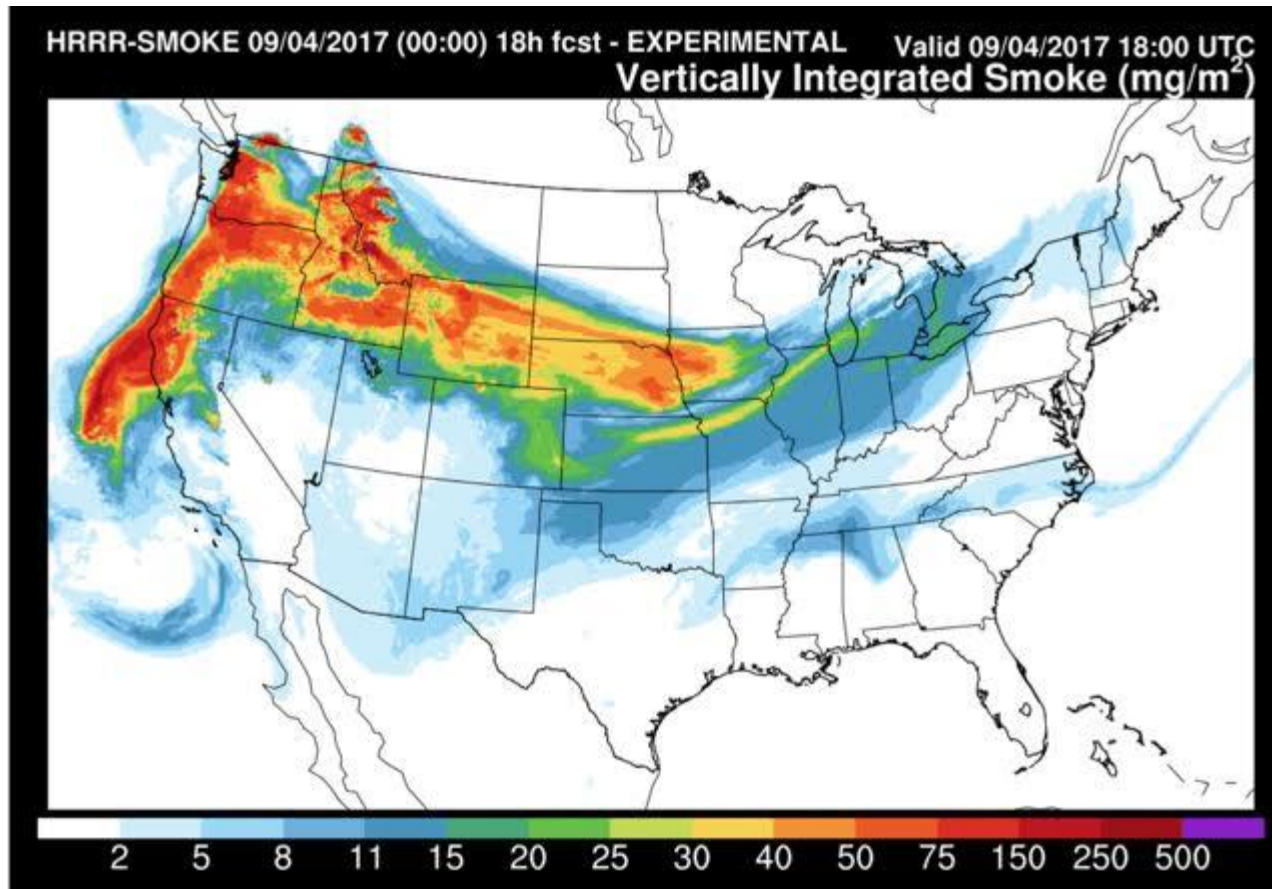
NOAA Forecasts Smoke Transport during Active 2017 Fire Season in the West



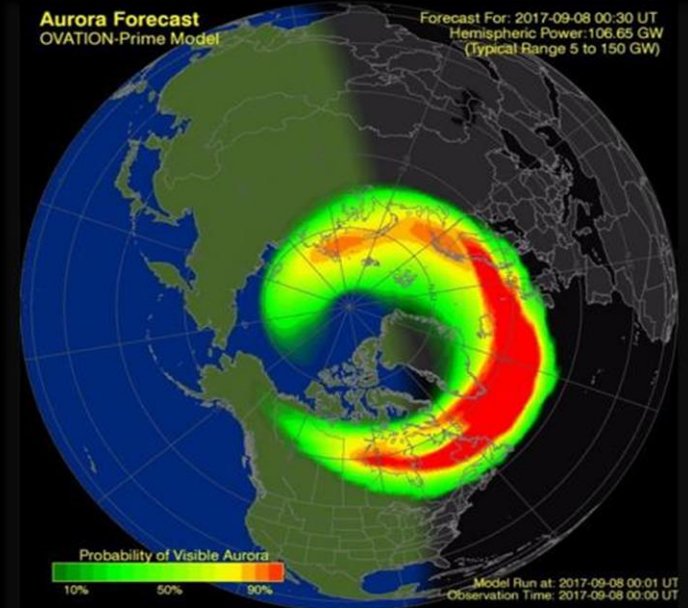
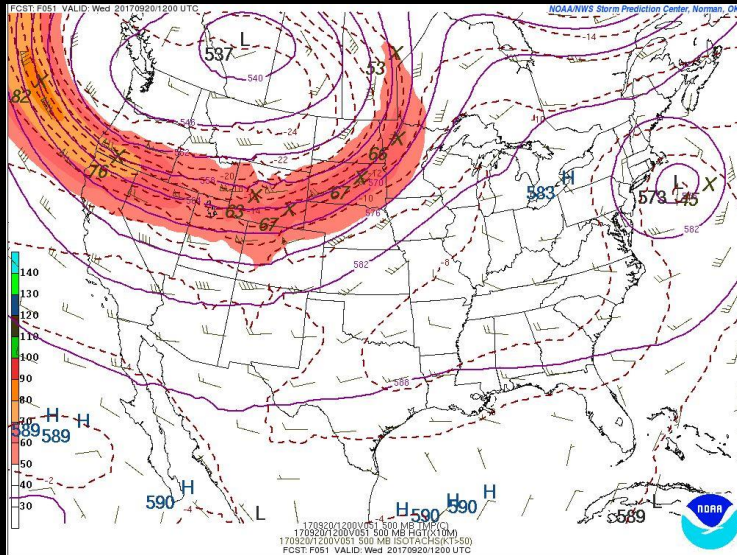
NOAA Forecasts Smoke Transport during Active 2017 Fire Season in the West



NOAA Forecasts Smoke Transport during Active 2017 Fire Season in the West



Sept 8: NOAA Contributes to Natural Disaster Response “from the Surface of the Sun to the Depths of the Ocean”



NWS Operations Center

Tsunami Threat Forecast for Some Pacific Ocean Coasts

Key Points

- An earthquake of 8.2 occurred off the coast of Chiapas, Mexico at 12:49am ET Friday, Sep 8th.
- **Tsunami** waves have been observed.
- Based on all available data, hazardous **tsunami** waves are forecast for some coasts.
- **Tsunami** waves reaching 0.3 to 1 meters above the tide level are possible for:
 - Some coasts of American Samoa.
- **Tsunami** waves will be less than 0.3 meters above the tide level are possible for:
 - Hawaii
 - Northwestern Hawaiian Islands.
 - Yap



Climate Adaptation and Mitigation Update

- Montreal Protocol
- WMO's GHG index release
- 2017 is the 2nd warmest year on record (so far)



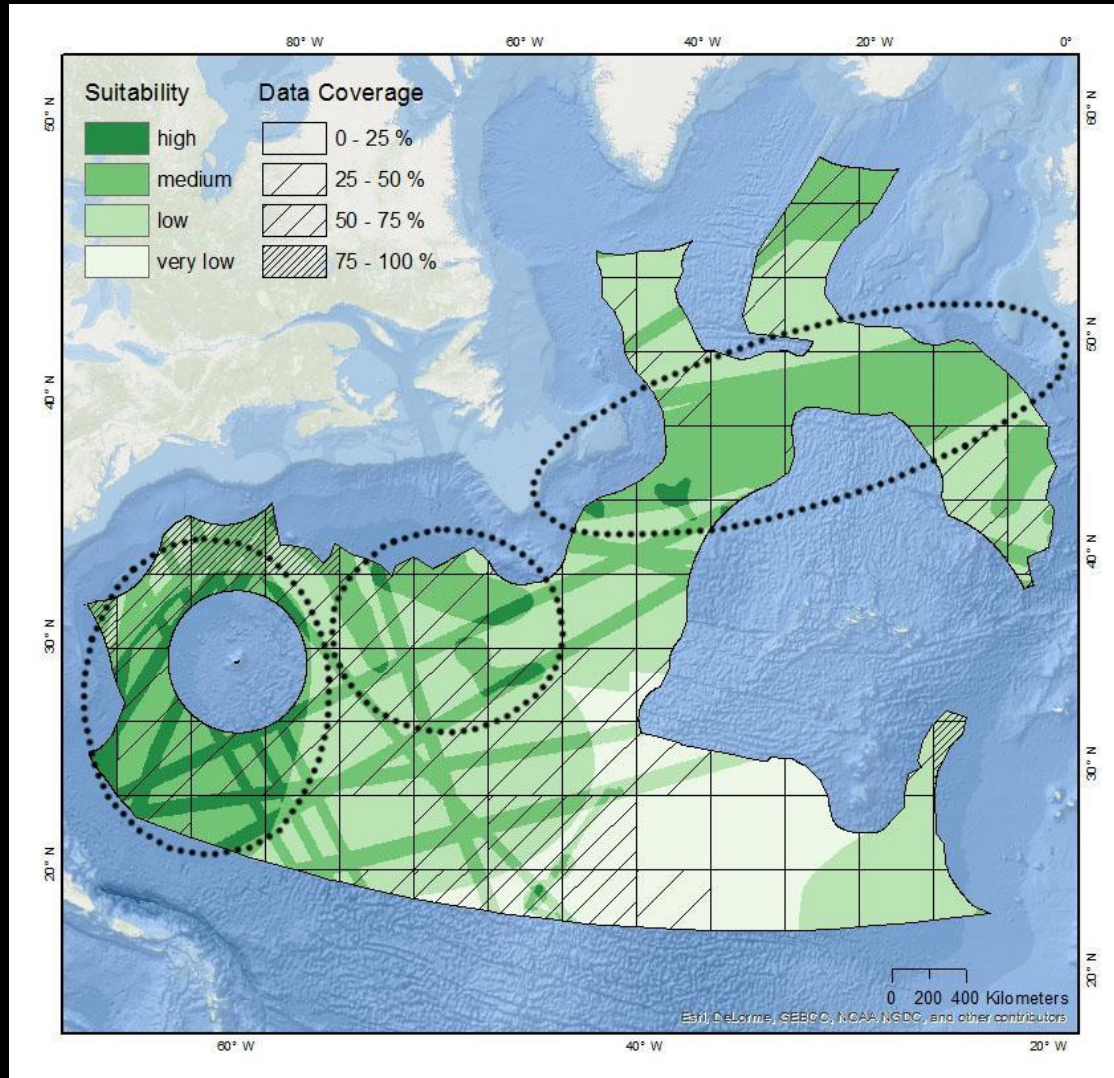
**Healthy
Oceans
Update &
Resilient
Coastal
Communities
and Economies
Update**



NOAA Partners with XL Catlin for Virtual Sanctuaries Tour



Galway Mapping



Our Ocean Conference 2017



<http://ec.europa.e>



<https://img.huffingtonpost.com>



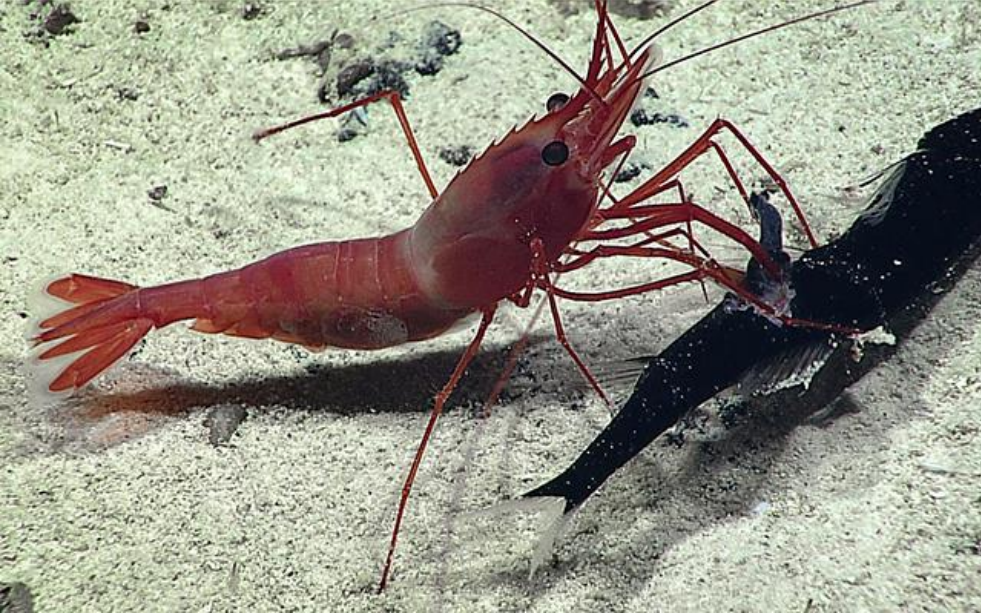
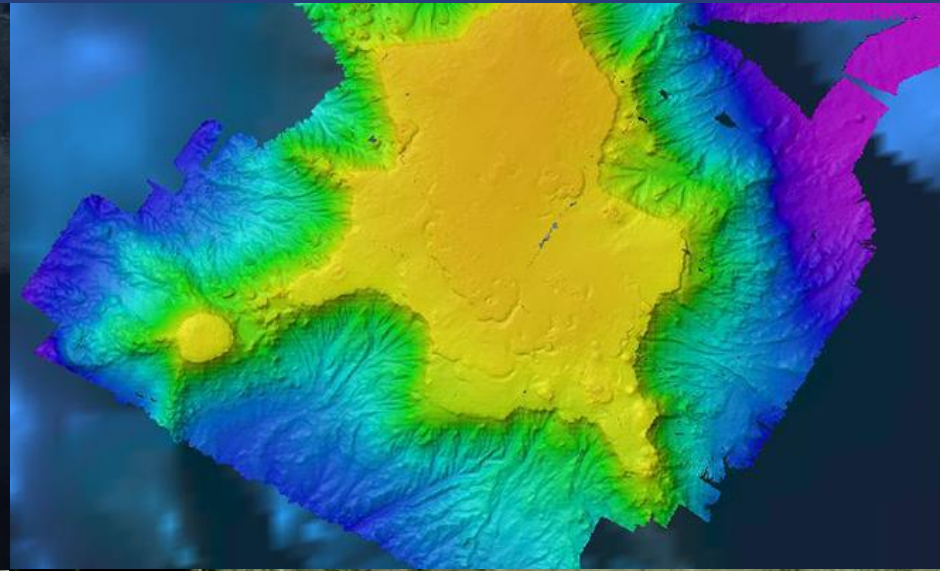
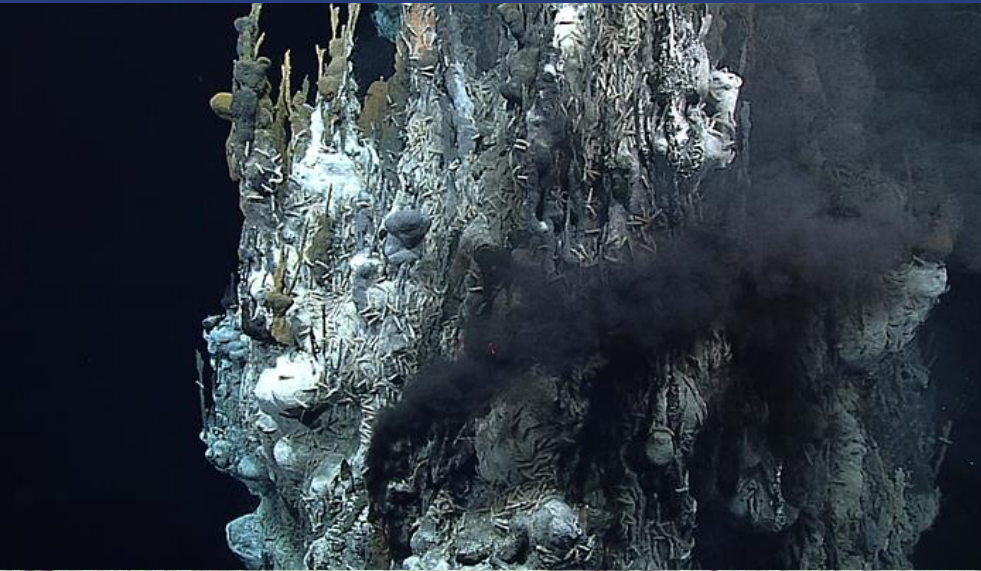
New Stock Status and Overfishing Limits Set for 27 Hawaiian Reef and Bottom Fish Species



New Technology for Assessing Fish Stocks



CAPSTONE Completed



CAPSTONE Operations 2015-2017

-  United States
-  SPREP Members
-  Republic of the Marshall Islands
-  U.S. Marine Protected Areas
-  Phoenix Islands Protected Area
-  Marae Moana, Cook Islands
-  *Okeanos Explorer* Tracklines



0 125 250 500 750 1,000
Nautical Miles



Marianas Trench MNM

Wake Island PRIMNM

Papahānaumokuākea MNM

Musicians Seamounts

Hawaii, U.S.

Johnston Atoll PRIMNM

Guam

Commonwealth of the Northern Mariana Islands

Republic of the Marshall Islands

Howland and Baker Islands PRIMNM

Republic of Kiribati

Phoenix Islands Protected Area

Tokelau (NZ)

Independent Samoa

American Samoa

Jarvis Island PRIMNM

Kingman Reef and Palmyra Atoll PRIMNM

Republic of Kiribati

Cook Islands Marae Moana

Rose Atoll MNM

National Marine Sanctuary of American Samoa

CSAR: Chief Scientist Annual Report



2017

NOAA Chief Scientist's Annual Report

National Oceanic and Atmospheric Administration
U.S. Department of Commerce



CSAR: Selection of NOAA R&D Accomplishments

Integrated Earth System Processes and Predictions

A Revolutionary Global Weather Model

Environmental Observations and Data

Next Generation Satellite Provides Enhanced Observational Capabilities

Decision Science, Risk Assessment, and Risk Communication

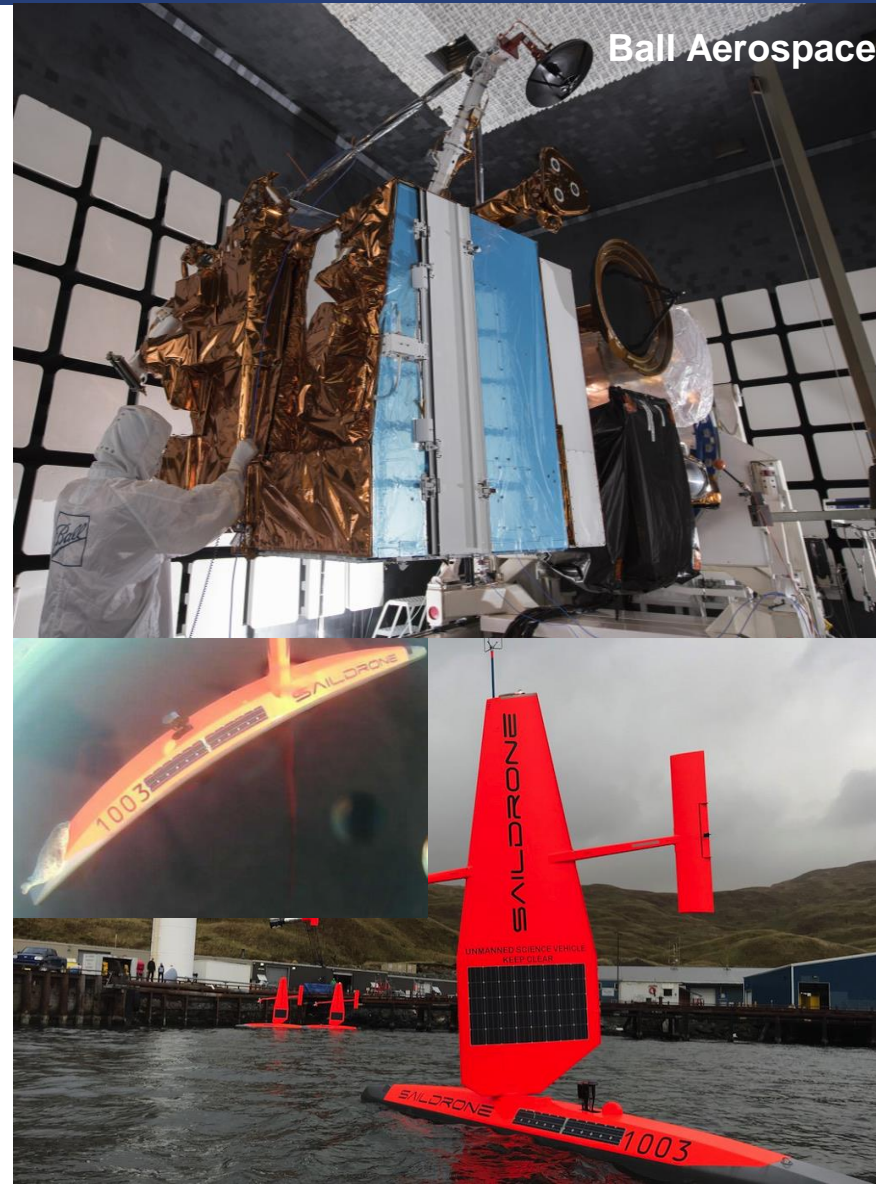
Tools and Expertise to Help U.S. Aquaculture Industry Expand

Water Prediction

Storm Surge Planning and Preparedness

Arctic

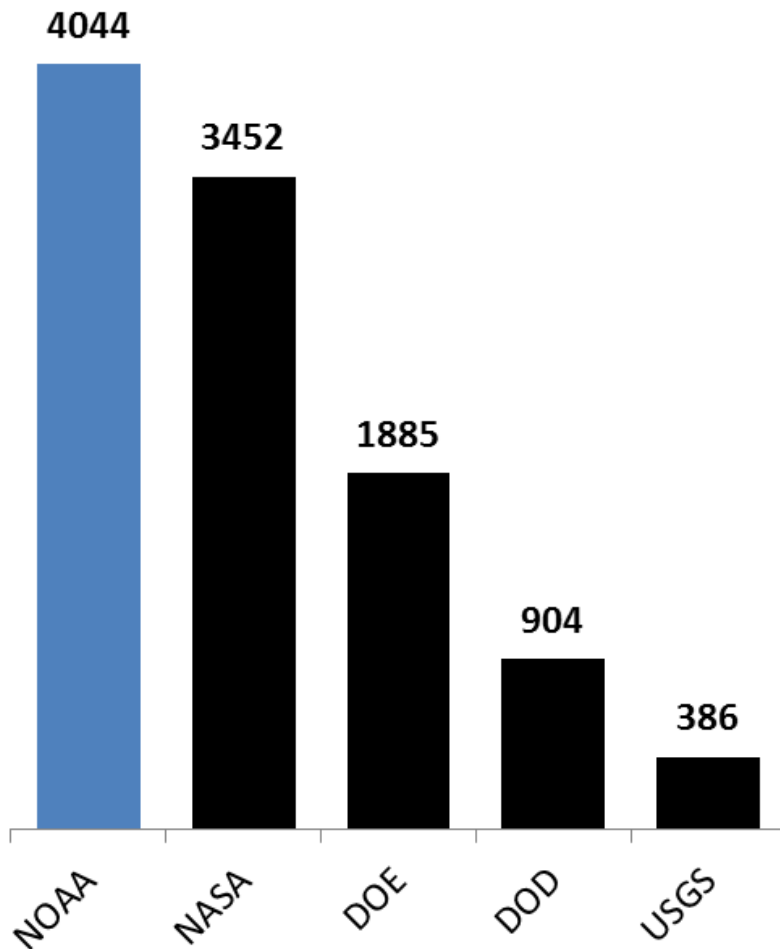
Innovative Technology for Arctic Exploration



Bibliometrics: Meteorology and Atmospheric Sciences

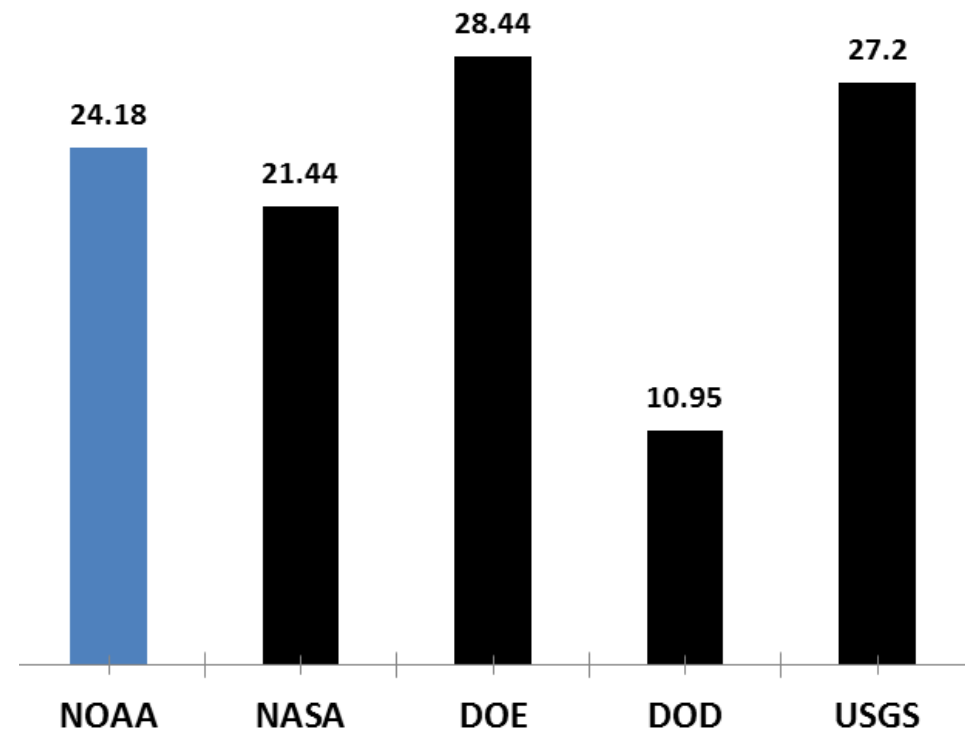
Number of Articles

(2011-2016)



% of Articles in Top 10%

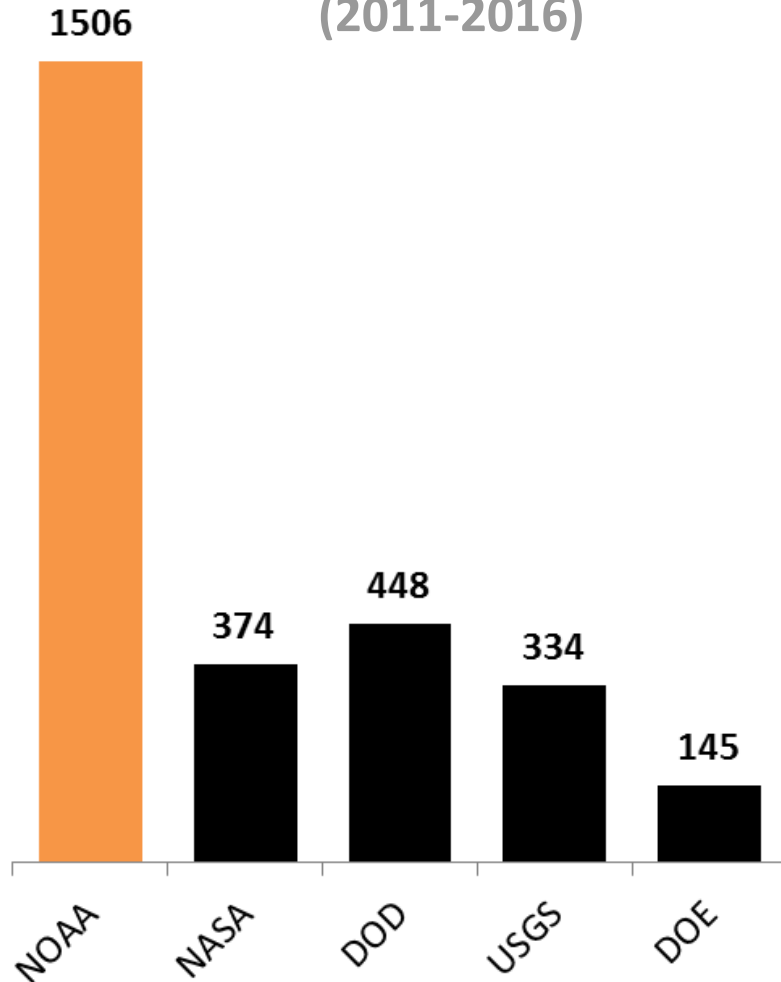
(2011-2016)



Bibliometrics: Oceanography

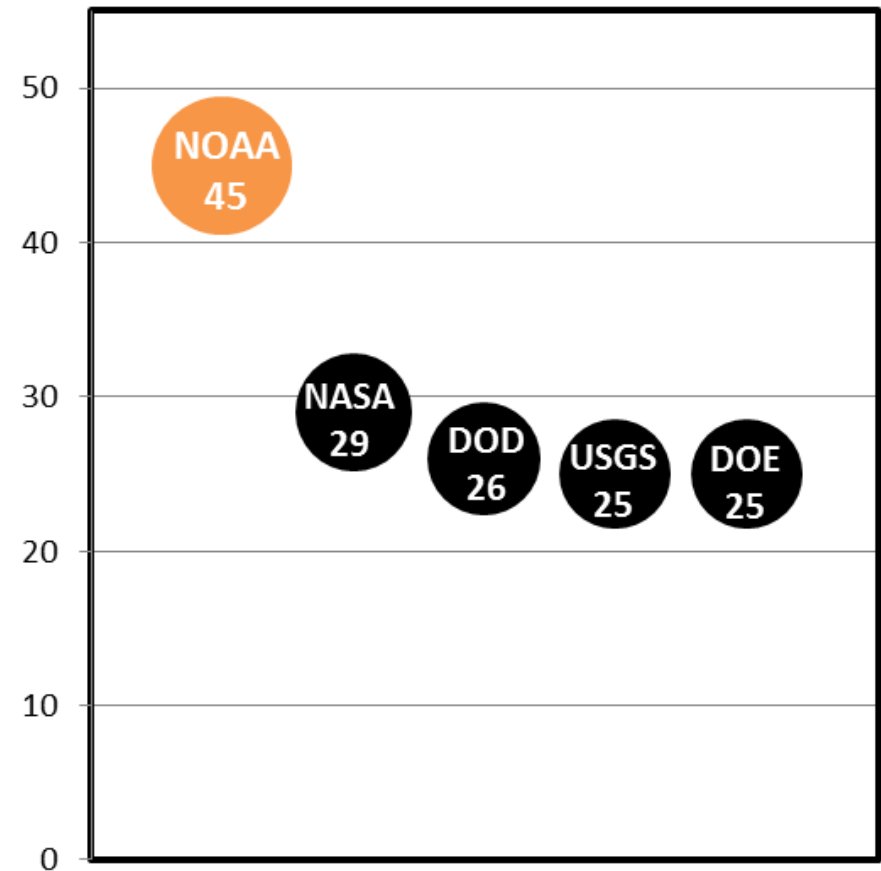
Number of Articles

(2011-2016)



H - Index

(2011-2016)



Questions?

